

WHAT IS CLAIMED

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1. A belt for a material web producing machine, comprising:
a plurality of long-chain strength supports arranged to form interstices; and
a filler at least partially filling the interstices.
2. The belt of claim 1, wherein the belt supports a paper web in the web
producing machine.
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3. The belt of claim 1, wherein the long-chain strength supports comprise a
metal having a high thermal conductivity.
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4. The belt of claim 3, wherein the metal is one of stainless steel and
bronze.
5. The belt of claim 1, wherein the long-chain strength supports comprise
filaments.
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6. The belt of claim 5, wherein the filaments comprise a metal.
7. The belt of claim 1, wherein the long-chain strength supports comprise a
substantially circular cross-section.
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8. The belt of claim 1, wherein the long-chain strength supports comprise a
substantially rectangular cross-section.
9. The belt of claim 1, wherein the long-chain strength supports comprise a

substantially square cross-section.

10. The belt of claim 1, wherein the long-chain strength supports comprise a substantially oval cross-section.

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11. The belt of claim 1, wherein the long-chain strength supports comprise a polygonal cross-section.

12. The belt of claim 1, wherein the long-chain strength supports comprise a variable cross-sectional shape along their lengths.

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13. The belt of claim 1, wherein the filler comprises a plastic.

~~14. The belt of claim 1, wherein the belt is at least substantially impermeable to a fluid.~~

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~~15. The belt of claim 14, wherein the fluid is a liquid.~~

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16. The belt of claim 1, further comprising beadlike protuberances located at peripheral regions of the belt.

17. The belt of claim 16, wherein the beadlike protuberances comprise woven long-chain strength supports.

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18. The belt of claim 16, wherein the beadlike protuberances comprise the woven long-chain strength supports, at least one additional material mixture, and

the filler.

sub B¹ → 19. The belt of claim 1, wherein the belt comprises a surface which substantially comprises the long-chain strength supports.

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20. The belt of claim 19, wherein the belt is impermeable to a fluid.

sub B² → 21. The belt of claim 1, wherein the belt comprises a smooth surface which substantially comprises the long-chain strength supports covering the filler.

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22. The belt of claim 1, wherein the belt comprises a screen.

23. The belt of claim 22, wherein the screen is flexible and formed of woven long-chain strength supports.

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sub B³ → 24. The belt of claim 1, wherein the belt comprises an interwoven sheet of the long-chain strength supports.

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sub A³ → 25. A process for producing a belt, comprising:
forming a sheet from a plurality of long-chain strength supports, the sheet comprising a plurality of interstices disposed between the long-chain strength supports; and
filling at least a portion of the interstices with a filler.

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26. The process of claim 25, wherein the filler comprises a plastic.

27. The process of claim 25, wherein the long-chain strength supports
comprise a metal.

5 28. The process of claim 25, wherein the filling further comprises:
dipping the sheet into a liquid filler.

29. The process of claim 25, wherein the filling further comprises:
spraying the sheet with a liquid filler.

10 30. The process of claim 25, further comprising:
smoothing at least one surface of the sheet after filling the sheet.

31. The process of claim 30, wherein the filler comprises a liquid.

15 32. The process of claim 30, wherein the smoothing comprises:
treating the at least one surface to remove a portion of the filler.

33. The process of claim 32, wherein the treating comprises grinding the at
least one surface.

20 34. The process of claim 25, further comprising:
scraping at least one surface of the sheet after filling the sheet.

25 35. The process of claim 34, wherein the scraping comprises removing a
portion of the filler from the at least one surface.

36. The process of claim 25, wherein the forming further comprises:
weaving the long-chain strength supports.

Sub B⁴ →

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~~37. The process of claim 36, wherein the weaving density is adjustable
based upon a desired surface requirement.~~

~~38. The process of claim 25, further comprising:
guiding a paper web on the belt.~~

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Sub B⁴ →

~~39. A belt for guiding a material web, comprising:
a woven metal screen;
the woven metal screen comprising metal filaments running in a
longitudinal direction, the metal filaments crossing one another so as to form
interstices; and
a filler which at least partially fills the interstices.~~

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40. The belt of claim 39, further comprising at least two filaments disposed
within the interstices and running substantially perpendicular to the longitudinal
direction.

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41. The belt of claim 40, wherein the metal comprises stainless steel.

42. A process for producing a belt, comprising:

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forming a sheet from a plurality of metal filaments running in a longitudinal
direction, the sheet comprising a plurality of interstices disposed between
filaments;

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filling at least a portion of the interstices with a plastic filler;

scraping a portion of the filler from at least one surface of the sheet to

expose the metal filaments.

43. The process of claim 42, further comprising:
curing the filler; and
grinding the at least one surface.

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